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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/900,482	07/06/2001	Taqi Hasan	NEXSI-01025US0	4153

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SHUMAKER & SIEFFERT, P. A.  
8425 SEASONS PARKWAY  
SUITE 105  
ST. PAUL, MN 55125

EXAMINER

QURESHI, SHABANA

ART UNIT	PAPER NUMBER
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2155

DATE MAILED: 01/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/900,482

Applicant(s)

HASAN ET AL.

Examiner

Shabana Qureshi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-55 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/10/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement (IDS) submitted on March 10<sup>th</sup>, 2003 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Claim Objections***

2. Claim 26 is objected to because of the following informalities: grammatical error. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-18, 20, and 22-55 are rejected under 35 U.S.C. 102(b) as being anticipated by Krishnamurthy et al (US Patent No. 6,389,464).

Regarding claim 1, Krishnamurthy teaches a virtual management system for a data center, comprising:

- a management topology (figure 2) presenting devices (figure 2, item 14), log servers (column 17, lines 63-65), facilities (column 7, lines 14-35, ports, databases, DMOS), subscribers (column 3, lines 60-67, vendors, users) and

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- services (column 3, line 60 – column 4, line 6) as objects to an administrative interface (column 4, lines 7 – 32); and
- a configuration manager implementing changes to objects in the topology responsive to configuration input from an administrator via the administrative interface (column 4, lines 37-42).

As per claim 2, Krishnamurthy teaches the virtual management system of claim 1 wherein said administrative interface comprises a graphical user interface (column 18, lines 49-63).

As per claim 3, Krishnamurthy teaches the virtual management system of claim 1 wherein said administrative interface comprises a command line interface (column 18, lines 55-60).

As per claim 4, Krishnamurthy teaches the virtual management system of claim 2 wherein said administrative interface is provided by a host computer coupled to the configuration manager by a network (column 11, lines 9-20).

As per claim 5, Krishnamurthy teaches the virtual management system of claim 4 wherein the network is part of the data center (column 6, lines 5-10).

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As per claim 6, Krishnamurthy teaches the virtual management system of claim 4 wherein the network includes a wide area network (column 6, lines 5-10).

As per claim 7, Krishnamurthy teaches the virtual management system of claim 4 wherein the network includes the Internet (column 6, lines 5-10).

As per claim 8, Krishnamurthy teaches the virtual management system of claim 1 wherein the management topology includes a topology hierarchy of parent and children objects (column 17, lines 59-67).

As per claim 9, Krishnamurthy teaches the virtual management system of claim 8 wherein said hierarchy is organized by facilities parent, and each facility object includes children objects of subscribers, log servers, devices and services objects (column 17, lines 59-67, examiner interprets the hierarchy as taught by Krishnamurthy to teach this feature since the hierarchy is configurable as the administrator wishes and there are no restrictions as to how the hierarchy can be configured).

As per claim 10, Krishnamurthy teaches the virtual management system of claim 8 wherein said hierarchy is organized by subscribers parent objects, and each subscriber object includes services children (column 17, lines 59-67, examiner interprets the hierarchy as taught by Krishnamurthy to teach this feature since the hierarchy is configurable as the administrator wishes and there are no restrictions as to how the hierarchy can be configured).

As per claim 11, Krishnamurthy teaches the virtual management system of claim 8 wherein said hierarchy is organized by services parent object, and each service object includes children objects of subscribers, facilities and devices (column 17, lines 59-67, examiner interprets the hierarchy as taught by Krishnamurthy to teach this feature since the hierarchy is configurable as the administrator wishes and there are no restrictions as to how the hierarchy can be configured).

As per claim 12, Krishnamurthy teaches the virtual management system of claim 8 wherein said hierarchy is organized by a devices parent object, and each device object includes children objects of subscribers, services and facilities (column 17, lines 59-67, examiner interprets the hierarchy as taught by Krishnamurthy to teach this feature since the hierarchy is configurable as the administrator wishes and there are no restrictions as to how the hierarchy can be configured).

As per claim 13, Krishnamurthy teaches the virtual management system of claim 1 wherein the administrative interface is accessible from outside of the data center (column 7, lines 44-65).

As per claim 14, Krishnamurthy teaches the virtual management system of claim 1 wherein the administrative interface is accessible by a subscriber (column 8, lines 48-54).

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As per claim 15, Krishnamurthy teaches the virtual management system of claim 14 wherein the subscriber can configure services (column 8, lines 48-61).

As per claim 16, Krishnamurthy teaches the virtual management system of claim 14 wherein said service objects include a subscriber virtual private network (column 6, lines 5-10, 'corporate intranet').

As per claim 17, Krishnamurthy teaches the virtual management system of claim 14 wherein said service objects include a router (column 4, line 23; column 6, lines 45-47).

As per claim 18, Krishnamurthy teaches the virtual management system of claim 14 wherein said service objects include a subscriber firewall (column 4, lines 20-25; column 17, lines 58-65).

As per claim 20, Krishnamurthy teaches the virtual management system of claim 14 wherein said service objects include a web cache (column 4, lines 45-53).

As per claim 22, Krishnamurthy teaches the virtual management system of claim 1 wherein the configuration manager provides real time network services status to administrative interface (column 17, line 66 – column 18, line 7).

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As per claim 23, Krishnamurthy teaches the virtual management system of claim 1 wherein the configuration manager comprises a server and an agent in a service device (column 16, lines 17-23).

As per claim 24, Krishnamurthy teaches the virtual management system of claim 23 wherein the server and the agent are coupled via a network (column 16, lines 17-23).

As per claim 25, Krishnamurthy teaches the virtual management system of claim 23 wherein the network is a wide area network (column 6, lines 5-10).

As per claim 26, Krishnamurthy teaches the virtual management system of claim 24 wherein communication is performed via HTTP get and post operations (column 7, lines 54-65; column 8, lines 52-61).

As per claim 27, Krishnamurthy teaches the virtual management system of claim 1 wherein access to each of said objects via said administrative interface is governed by an administrative hierarchy (column 17, lines 59-67).

As per claim 28, Krishnamurthy teaches a system for managing a plurality of networking services provided by devices coupled to a network in a data center, comprising:

- a configuration controller coupled to the devices (column 4, lines 37-42);



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- a service management interface for the controller enabling device configuration based on a service object (column 4, lines 55-60, service object is interpreted to be a driver);
- a subscriber management interface for the controller enabling device configuration based on a subscriber object (figure 8, item 134);
- a device management interface for the controller enabling device configuration based on device object (column 4, lines 55-60); and
- a facility management interface allowing the administrator to configure objects in the system based on a facility object (figure 28, log servers are interpreted to be facility objects).

As per claim 29, Krishnamurthy teaches the system of claim 28 wherein the service management interface presents subscriber objects, facility objects or device objects relative to the service object (figure 5, item 110, this menu expands to menus of figures 6-24; column 6, lines 55-67, a relational database stores the information in the menus).

As per claim 30, Krishnamurthy teaches the system of claim 28 wherein the subscriber management interface presents services relative to the subscriber object (figure 5, item 110, this menu expands to menus of figures 6-24; column 6, lines 55-67, a relational database stores the information in the menus).

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As per claim 31, Krishnamurthy teaches the system of claim 28 wherein the device management interface presents facilities, services and subscribers relative to the device object (figure 5, item 110, this menu expands to subsequent menus in figures 6-24; column 6, lines 55-67, a relational database stores the information in the menus).

As per claim 32, Krishnamurthy teaches the system of claim 28 wherein the facility management interface presents devices, subscribers, and services relative to the facility object (figure 5, item 110, this menu expands to menus of figures 6-24; column 6, lines 55-67, a relational database stores the information in the menus).

As per claim 33, Krishnamurthy teaches the system of claim 28 wherein access to management of objects in each interface is governed by an administrative hierarchy (column 17, lines 59-67).

As per claim 34, Krishnamurthy teaches the system of claim 28 wherein the interfaces and the controller are coupled via a wide area network (column 6, lines 5-10).

As per claim 35, Krishnamurthy teaches the system of claim 28 wherein the interfaces are provided in a graphical user interface (column 18, lines 49-63).

As per claim 36, Krishnamurthy teaches the system of claim 35 wherein each said interface is linked to a content service application and a service module coupled to a device agent to administer changes in the device via the device agent (column 16, lines 17-23).

As per claim 37, Krishnamurthy teaches the system of claim 28 wherein each of said interfaces communicates with the configuration controller via the Internet (column 6, lines 5-10).

As per claim 38, Krishnamurthy teaches an interface for a network, comprising:

- a graphical user interface presenting a plurality of network items as objects within the interface (figure 5; column 10, lines 48-59);
- service applications coupled to the graphical user interface objects (figure 5, item 11), the applications controlling configuration of network objects responsive to the user interface (figure 5, item 110; column 10, lines 48-59); and
- a network manager interacting with devices on the network to implement changes provided by the service applications (column 6, lines 22-27).

As per claim 39, Krishnamurthy teaches the interface of claim 38 wherein the objects include a subscriber object.

As per claim 40, Krishnamurthy teaches the interface of claim 38 wherein the objects include a device object (column 4, lines 55-60).

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As per claim 41, Krishnamurthy teaches the interface of claim 38 wherein the objects include a service object (column 4, lines 55-60, service object is interpreted to be a driver).

As per claim 42, Krishnamurthy teaches the interface of claim 41 wherein the service applications are launched by one or more service objects (column 6, lines 20-27; column 8, lines 48-61).

As per claim 43, Krishnamurthy teaches the interface of claim 41 wherein the service applications are hosted by the network manager (column 11, lines 10-20).

As per claim 44, Krishnamurthy teaches the interface of claim 38 wherein the objects include a facility object (figure 28, log servers are interpreted to be facility objects).

As per claim 45, Krishnamurthy teaches the interface of claim 38 wherein the network manager comprises a network management server and a device agent (column 16, lines 17-23).

As per claim 46, Krishnamurthy teaches the interface of claim 38 wherein the management server provides said graphical user interface to a user device (column 18, lines 49-63).

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As per claim 47, Krishnamurthy teaches the interface of claim 38 object management interface and having a plurality of configuration applications and configurations storage for objects coupled to the network (column 6, lines 45-67).

As per claim 48, Krishnamurthy teaches the interface of claim 38 wherein the graphical user interface is provided in a Web browser (column 6, lines 22-27).

As per claim 49, Krishnamurthy teaches the interface of claim 38 wherein the graphical user interface is coupled to the manager via a Wide area network (column 6, lines 45-54).

As per claim 50, Krishnamurthy teaches a graphical network interface for a data center, comprising:

- a plurality of object views, including: a facility object view, a subscriber object view, a device object view, and a log server object view (figure 5, with subsequent menus of figures 6-24; column 10, lines 48-59), each said view including a set objects organized by a hierarchy relative to another of said views (column 17, lines 59-67);
- and at least one link to an object in said set of objects, allowing modification of configuration data for the object via the view (figures 5-24; column 10, lines 32-47).

As per claim 51, Krishnamurthy teaches the graphical network interface of claim 50 wherein said facility view includes at least a subscriber branch or a device branch or a log server branch (column 10, lines 6-31).

As per claim 52, Krishnamurthy teaches the graphical network interface of claim 50 wherein said subscriber view includes at least a device branch, a log server branch or a facilities branch (column 10, lines 6-31).

As per claim 53, Krishnamurthy teaches the graphical network interface of claim 50 wherein said device view includes at least a facilities view (figures 20-21 and relevant text).

As per claim 54, Krishnamurthy teaches the graphical network interface of claim 50 wherein said interface is provided in a Web browser (column 6, lines 22-27).

As per claim 55, Krishnamurthy teaches the graphical network interface of claim 50 wherein said interface is provided as machine readable code for an administrative device (column 8, lines 24-61).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krishnamurthy et al (US Patent No. 6,389,464) in view of Araujo et al (US Publication No. 2002/0032725 A1).

As per claim 19, Krishnamurthy teaches the virtual management system of claim 14. While Krishnamurthy discloses the troubleshooting, monitoring, analyzing of network nodes (column 18, lines 32-39), Krishnamurthy does not explicitly state that the service objects include a load balancing application. However, Araujo teaches a virtual management system where service objects include a load balancing application [0038]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate load balancing into the invention of Krishnamurthy in order to monitor and analyze the network as Krishnamurthy aims to do (column 18, lines 32-39).

As per claim 21, Krishnamurthy teaches the virtual management system of claim 14. Although Krishnamurthy's invention includes the provision of security procedures (column 7,

lines 32-43), Krishnamurthy does not explicitly state the system includes SSL service. However, Araujo teaches a virtual management system where the service objects include a secure sockets layer accelerator service [0040; 0080]. It would have been obvious to one of ordinary skill in the art to use SSL to further security for users as Krishnamurthy intends to do in column 7, lines 32-43).

***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shabana Qureshi whose telephone number is (571) 272-3990. The examiner can normally be reached on Monday - Thursday, 9:30 am to 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam can be reached on (571) 272-3978. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

January 7, 2005  
SQ

Shabana Qureshi  
Examiner  
Art Unit 2155

  
**HOSAIN ALAM**  
SUPERVISORY PATENT EXAMINER